

RECENT PAPERS BEARING ON METEOROLOGY.

R. A. EDWARDS, Acting Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a —

- Nature. London. Vol. 71.*
 Watt, Andrew. Inversions of temperature on Ben Nevis. P. 483.
 — Prof. Pietro Tacchini. P. 564.
- Meldola, R. The late Professor Tacchini. P. 583.
 — Nature of sun-spots. [Note]. P. 592.
- Skinner, Sidney. Experiment on pressure due to waves. P. 609.
- Nature. London. Vol. 72.*
 Lockyer, William J. S. Recent spectroheliograph results. Pp. 9-13.
- Mount Wilson Observatory. [Note]. P. 19.
- Science. New York. New Series. Vol. 21.*
 Smith, D. T. The origin of cyclones, tornadoes and cold waves. Pp. 705-706.
- Ward, R. DeC. Altitude and acclimatization in the Tropics. [Note on Report of the Census of the Philippines.] Pp. 711-712.
- Ward, R. DeC. Kite-flying at sea: recent results. [Note on article of H. Hergesell.] Pp. 795-796.
- Ward, R. DeC. Floods in the Sahara. [Note]. P. 796.
- Ward, R. DeC. Mountain sickness. [Note on work of A. L. Rotch.] P. 796.
- London, Edinburgh, and Dublin Philosophical Magazine. 6th Series. Vol. 9.*
 Campbell, Albert. On direct reading resistance-thermometers, with a note on composite thermocouples. Pp. 713-722.
- Astrophysical Journal. Chicago. Vol. 21.*
 Fox, Philip. Observations with the Rumford spectroheliograph. Pp. 351-355.
- Exner, Karl and Villiger, W. The "optical power" of the atmosphere and its measurement. Pp. 368-370.
- Geographical Journal. London. Vol. 25.*
 — The Indian earthquake. Pp. 548-549.
- Scottish Geographical Magazine. Edinburgh. Vol. 21.*
 — Plans for obtaining subterranean temperatures. Pp. 275-276.
- Philosophical Transactions of the Royal Society of London. London. Series A, Vol. 204.*
 Rayleigh, Lord. On the compressibility of gasses between one atmosphere and a half an atmosphere of pressure. Pp. 351-372.
- Knowledge. London. New Series. Vol. 2.*
 Clarke, Agnes M. Modern cosmogonies. Pp. 95-97.
 — International Catalogue of Scientific Literature. Pp. 100-101.
- Journal of Geography. New York. Vol. 4.*
 — Watching for hurricanes. [Reprint from The World To-day.] P. 184.
 — Accuracy of weather forecasts in Norfolk, Va. P. 186.
- Symons's Meteorological Magazine. London. Vol. 40.*
 Lempert, R. G. K. On a form of sudden weather change. Pp. 41-44.
- Southall, H. Long period rainfall averages. P. 50.
- Boys, H. A. A parallel continued. Pp. 51-52.
- Russell, Spencer C. The thunderstorms of March 12 and 15. P. 52.
- Fletcher, Francis. The legend of Sahara dust falls. Pp. 53-54.
- Proceedings of the American Academy of Arts and Sciences. Boston. Vol. 40.*
 Hogg, J. L. Viscosity of air. Pp. 611-612.
- Bulletin of the American Geographical Society. New York. Vol. 37.*
 Ward, R. DeC. The climate of Tibet. [Note on address of Frank Younghusband.] P. 229.
- Ward, R. DeC. Autumn rainfall and the yield of wheat in England. [Note on work of W. N. Shaw.] P. 231.
- H., G. D. English fogs and commerce. [Note on report of U. S. Consul Mahin.] Pp. 231-232.
- Ward, R. DeC. The vertical gradient of rainfall at Ben Nevis and the Puy de Dôme. [Note on work of A. Watt.] P. 232.
- Science Abstracts. London. Vol. 8.*
 Allan, G. E. Manometer device for air thermometers. [Abstract of article of H. Edwards.] P. 226.
- [Borns], H. Daily temperature variation in the higher atmosphere. [Abstract of article of Teisserenc de Bort.] P. 231.
- [Borns], H. Oscillation of solar activity and climate. [Abstract of article of C. Easton.] Pp. 231-232.
- [Borns], H. Influence of the time factor on the correlation between barometric heights at stations more than 1000 miles apart. [Abstract of article of F. E. Cave-Brown-Cave.] P. 232.
- [Borns], H. High barometer and temperature inversion, end of January. [Abstract of article of W. H. Dines.] P. 232.
- Stewart, J. J. Radio-active emanations in the atmosphere. [Abstract of article of A. Gockel.] P. 244.
- Willows, R. S. Radio-activity of underground air. [Abstract of article of H. M. Dabourian.] P. 246.
- [Starling], S. J. Automatic recorder of amount of ionisation of the atmosphere. [Abstract of article of P. Langevin and M. Moulin.] Pp. 270-271.
- [Starling], S. J. Recorder of atmospheric ionisation by employing a jet of water. [Abstract of article of C. Nordmann.] P. 271.
- Channon's Review. Chicago. December, 1904.*
- Cox, Henry J. Work of the weather man. Pp. 7-10.
- Popular Science Monthly. New York. Vol. 67.*
- Rutherford, E. Present problems of radio-activity. Pp. 5-34.
- American Journal of Science. New Haven. 4th Series. Vol. 19.*
- Barus, Carl. Alternations of large and small coronas observed in case of identical condensations produced in dust-free air saturated with moisture. Pp. 349-356.
- Terrestrial Magnetism and Atmospheric Electricity. Baltimore. Vol. 10.*
- Arrhenius, S. A. On the electric charge of the sun. Pp. 1-8.
- Chree, C. Review of Maunder's recent investigations on the cause of magnetic disturbances. Pp. 9-14.
- Burbank, J. E. Earth currents: and a proposed method for their investigation. Pp. 23-49.
- Nordmann, Charles. Photographic registration of atmospheric ionization by a dropping fluid. Pp. 60-62.
- Proceedings of the Royal Society. London. Vol. 74.*
- Travers, Morris W. and Gywer, A. G. C. On the comparison of the platinum scale of temperature with the normal scale at temperatures between 44° and -190 C., with notes on constant temperatures below the melting point of ice. Pp. 528-538.
- Shaw, W. N. On a relation between autumnal rainfall and the yield of wheat of the following year. Pp. 552-553.
- Proceedings of the Royal Society. London. Series A. Vol. 76.*
- Fox, Francis. The boring of the Simplon Tunnel, and the distribution of temperature that was encountered. Pp. 29-33.
- Lyons, H. G. On the relation between variations of atmospheric pressure in northeast Africa and the Nile flood. Pp. 66-86.
- MacLaurin, Richard C. Theory of the reflection of light near the polarizing angle. Pp. 49-65.
- Proceedings of the Royal Society. London. Series B. Vol. 76.*
- Brown, Horace T. and Escombe F. On the variations in the amount of carbon dioxide in the air of Kew during the years 1898-1901. Pp. 118-121.
- L'Aerophile. Paris. 13 année.
- La Vaulx, Henry de. L'Observatoire de Blue Hill. Pp. 86-87.
- Bulletin de la Société Belge d'Astronomie. Bruxelles. 10 année.
- Arctowski, H. and Jacobs, F. Concours international de prévision du temps septembre 1905. Pp. 97-101.
- Gelée blanche, givre, verglas. Pp. xxv-xxvi.
- La Géographie. Paris. Vol. 11.
- Rabot, Charles. La tempête du 31 décembre 1904 dans la Baltique accidentale. Pp. 32-38.
- Rabot, Charles. La région la plus pluvieuse de l'Europe. Pp. 40-41.
- Rabot, Charles. Exploration canadienne dans l'archipel polaire américain. [Abstract of report of A. P. Low.] Pp. 129-132.
- Ciel et Terre. Bruxelles. 26 année.
- Maunder, E. W. L'origine solaire des perturbation du magnétisme terrestre. Pp. 51-56.
- Le climat de Jérusalem. [Review of work of G. Arvanitakis.] Pp. 69-72.
- Archives des Sciences Physiques et Naturelles. Genève. 4 Période. Tome 19.
- Bührer, B. and Dufour, H. Observations actinométriques de 1903. Pp. 388-390.
- Dufour, Henri. Sur la température moyenne de Lausanne. Pp. 399-401.
- Dufour, Henri. Radioactivité de l'air dans les mines de Bex. Pp. 401-403.
- La Nature. Paris. 33 année.
- Martel, E. A. A quoi servent les explorations antarctiques. Pp. 291-293.
- B. L. Une ascension scientifique. P. 347.
- Le Temps qu'il Fait. Mons. 2 année.
- V., V. D. L'atmosphère et sa transparence. Pp. 69-72.
- Comptes Rendus de l'Académie des Sciences. Paris. Tome 140.
- Touchet, Em. Sur une photographie d'éclair montrant une incandescence de l'air. Pp. 1031-1033.
- Annuaire de la Société Météorologique de France. Paris. 53 année.
- Moureaux, Th. Résumé de 30 année d'observations au Parc Saint Maur (1874-1903). IV. Nébulosité. Pp. 57-61.
- Teisserenc de Bort, Léon. Variation de la température quotidienne dans la haute atmosphère. Pp. 62-64.

- Nordmann, Charles.** Enregistreur à écoulement liquide de l'ionisation atmosphérique. Pp. 64-66.
- Raulin, V.** Sur les observations pluviométriques au Japon. Pp. 67-73.
- Das Wetter. Berlin.** 22 Jahrgang.
- Arendt, Th. Gewitter und Hagelgefahr. Pp. 73-82.
- Sieberg, August. Erdbeben und Witterung. Pp. 82-91.
- Edler, Eduard Schiefer. Nachwinter im April. Pp. 93-94.
- Assmann, Julius, sr. Ungewöhnlicher Niederschlag im November-Monat, November 1904, in den drei Wintermonaten und im Nachwinter-Monat März 1905 in Lüdenscheid. Pp. 94-96.
- Physikalische Zeitschrift. Leipzig.** 6 Jahrgang.
- Bemmelen, W. van. Messungen der luftelektrischen Zerstreuung während der ringförmigen Sonnenfinsternis am 17. März 1904. Pp. 235-236.
- Gaea. Leipzig.** 41 Jahrgang.
- Die Schließung des meteorologischen Observatoriums auf dem Ben Nevis. Pp. 338-340.
 - Grosses Erdbeben in Vorderindien am 4. April 1905. Pp. 362-363.
 - Eine merkwürdige Störung in der Erscheinung der Bischöflichen Ringe. [Abstract of article of J. Maurer.] Pp. 375-376.
 - Untersuchungen über den Föhn in Innsbruck. [Abstract of article of H. von Ficker.] Pp. 376-377.
 - Die Höhe des Vogelfluges in der Luft. P. 380.
- Das Weltall. Berlin.** 5 Jahrgang.
- Schmidt, A. Die Gesetze der Lichtbrechung angewendet auf die Physik der Sonne. Pp. 240-246.
- Krebs, Wilhelm. Ungewöhnlich starke Szintillationen des Sonnenrande. Pp. 255-258.
- Walter, G. Strahlung im Sonnensystem. Pp. 269-270.
- Polis, P. Ueber die tägliche Periode meteorologischer Elemente unter besonderer Berücksichtigung der Registrierungen des Aachener Observatoriums. Pp. 271-281.
- Annalen der Hydrographie und Maritimen Meteorologie. Berlin.** 33 Jahrgang.
- Brennecke, W. Die Eisverhältnisse der nordischen Meere im Jahre 1904. [Review] Pp. 182-183.
- Hd. Temperatur des Meerwassers zu Tsingtau. Mai 1901 bis September 1901 und Oktober 1902 bis Dezember 1903. Pp. 185-184.
- Knipowitsch, N. Hydrologische Untersuchungen im Europäischen Eismeer. Pp. 193-205.
- Wegemann, G. Ursachen der vertikalen Temperaturverteilung im Weltmeere unter besonderer Berücksichtigung der Wärmeleitung. Pp. 206-211.
- Knipowitsch, N. Ueber die relative Regenarmut der deutschen Flachküsten. [Abstract of article of G. Hellmann.] Pp. 226-229.
- Naturwissenschaftliche Rundschau. Berlin.** 20 Jahrgang.
- Ficker, Heinrich von. Innsbrucker Föhnstudien. I. Beiträge zur Dynamik des Föhns. Pp. 189-190.
- Assmann, R. and Hergesell, H. Beiträge zur Physik der freien Atmosphäre. Pp. 191-192.
- Arctowski, Henryk. Aperçu des résultats météorologiques de l'hivernage antarctique de la "Begica". P. 204.
- Dewar, James and Hadfield, Robert Abbott. Die Wirkung der Temperatur flüssiger Luft auf die mechanischen und anderen Eigenschaften des Eisens und seiner Legierungen. Pp. 209-211.
- Teisserenc de Bort, L. Schwankung der täglichen Temperatur in der hohen Atmosphäre. Pp. 213-214.
- Julius, W. H. Erklärung der spektroheliographischen Ergebnisse durch anomale Dispersion. Pp. 221-222.
- Meteorologische Zeitschrift. Wien.** Band 22.
- Johannson, O. V. Ueber den Zusammenhang der meteorologischen Erscheinungen mit Sonnenfleckenperioden. Pp. 146-159.
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- Wolfer, A. Provisorische Sonnenflecken-Relativzahlen. P. 169.
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- Der Bishop'sche Ring und die Eruption des Peleé auf Martinique. P. 170.
 - Staubfall auf den Kanarischen Inseln. P. 170.
 - Meteorologische Beobachtungen in Boroma (Südafrika). P. 170-172.
- Hann, J. Täglicher Gang des Barometers zu Quixeramobim. Pp. 172-173.
- Conrad, V. Ueber die Elektrizitäts-Zerstruktur auf dem Sonnenschein. Pp. 173-174.
- Hann, J. Die jährliche und die tägliche Periode der Gewitter in Südinindien. P. 175.
- Hansky, A.** Aktinometrische Beobachtungen auf dem Montblanc. Pp. 176-177.
- Prohaska, Karl. Hagelwetter am 21. Mai 1904 in Kärnten und Steiermark. Pp. 177-179.
- Mazelle, Ed. Die Zerstreuung der atmosphärischen Elektrizität in Triest und ihre Abhängigkeit von den meteorologischen Elementen. P. 179-180.
- Johansson, Osc. V. Ausserordentliche Schwankungen des Luftdruckes und der Temperatur im Winter 1904-1905. Pp. 180-183.
- Kesslitz, W. Wetterkartenindex als Hilfsmittel für die Wetterprognose. Pp. 183-185.
- Pietro Tacchini. P. 185.
 - Prof. Viktor Raulin. P. 185.
- Arendt, Th. Verwendung des Wellmann'schen Doppelbildmikrometers zu meteorologischen Zwecken. Pp. 185-187.
- Michel, Fritz. Einige Verbesserungen am Kondensationshygrometer. Pp. 187-189.
- Hemel en Dampkring. Amsterdam.** 2 Jahrgang.
- Monnéé, A. J. Neerslag in het Koninkrijk der Nederlanden. Pp. 179-183.
- Mars, S. De algemene circulatie van den Dampkring. Pp. 184-186.
- Nell, Chr. A. C. Nog eens de telegrafische verbinding met Ijsland en der weervoorspellingen. Pp. 186-187.
- F. Weerkundige waarnemingen in het rijk der wolken. Pp. 190-192.
- Memorie della Società degli Spettroscopisti Italiani. Catania.** Vol. 34.
- Rajna, M. Circostanze dell'eclisse solare del 30 Agosto, 1905, calcolate per tutta Italia e regioni circonvicine. Pp. 78-82.
- Bulletin de la Société de Géographie de Lisbonne.** 23 série-1905.
- Berthoud, Paul. Météorologie de Lourenco Marques. Pp. 38-39.
- Atti della Reale Accademia dei Lincei. Roma.** Serie quinta. Vol. 12.
- Chistoni, Ciro. Risultati pirelometrici ottenuti col'attinometro di Viole negli anni 1900 e 1901 al R. Osservatorio Geofisico di Modena. Pp. 147-153.
- Chistoni, Ciro. Sul pirelometro a compensazione elettrica dell'Angström. Pp. 340-346; 451-456.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

R. A. EDWARDS, Acting Librarian.

The following titles have been selected from among the books recently received, as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Most of them can be loaned for a limited time to officials and employees who make application for them.

- Ames, J. S. (Ed.) Scientific Memoirs.
- No. 11. The discovery of induced electric currents. Vol. 1.
 - No. 12. Same. Vol. 2.
 - No. 13. The foundations of stereo-chemistry.
 - No. 14. The expansion of gases by heat.
 - No. 15. The laws of radiation and absorption.
- Austria. Kaiserliche Königliche Hydrographisches Central-Bureau. Jahrbuch des k. k. hydrographischen Zentralbüros. X. Jahrgang 1902.
- Berget, Alphonse. Physique du globe et météorologie. v, 353 pp.
- Carnegie Institution of Washington. Explorations in Turkestan with an account of the Basin of Eastern Persia and Sistan. Expedition of 1903, under the direction of Raphael Pumpelly. xii, 324 pp.
- Colorado College Observatory. Semianual bulletin of the Colorado College Observatory containing the annual meteorological summary for 1904. F. H. Loud, Ph. D., Director. (Colorado College Studies. General series No. 16. Science series Nos. 39-41. Vol. XI. Pp. 119-190.)
- Defant, Albert. Gesetzmässigkeiten in der Verteilung der verschiedenen Tropfengrössen bei Regenfällen. (Repr. Sitz. Akad., Wien. Bd. 114. Abt. II a.) 61 pp.
- Ficker, H. v. and Defant, A. Ueber den täglichen Gang der elektrischen Zerstreuung und des Staubgehaltes auf dem Patscherkofel. (Repr. Sitz. Akad., Wien. Bd. 114. Abt. II a.) 13 pp.
- Ficker, Heinz von. Innsbrucker Föhnstudien. I. Beiträge zur Dynamik des Föhns. (Repr. Denkschr. Akad., Wien. 78 Bd.) 81 pp.
- Fowle, F. E. jr. The discrepancy between solar radiation measured by the actinometer and by the spectro-bolometer. (Smithsonian miscell. coll., v. 7, Pt. 4.) Pp. 399-408.